

Owner/Operator Manual

For Masport Componentry: Primary Traps, Scrubbers, Pre-Filters, Oil Separators and Pumper Scent



Warning! This Manual includes important product safety information. Misuse of this product may result in severe injury or death. Read this manual carefully before attempting to use this product.



Record of Purchase

Serial Number: _____

Date Purchased: _____

Please carefully read the installation, operation and maintenance instructions for your Masport product. These are provided to assist you and they assume users have a basic level of mechanical competence.

If you have any questions about the correct installation, operation or maintenance procedures, please ask Masport.

Masport Standard Limited Warranty

Limited Warranty:

THE LIMITED WARRANTY SET FORTH IN THIS SECTION (THIS “LIMITED WARRANTY”) GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

SUBJECT TO THE TERMS SET FORTH HEREIN, MASPORT HEREBY WARRANTS THAT DURING THE WARRANTY PERIOD (DEFINED BELOW) THE PRODUCTS PURCHASED FROM MASPORT ON THE SITE OR OTHERWISE WILL, IN NORMAL AND INTENDED USE AND SERVICE, BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP.

OUR RESPONSIBILITY FOR DEFECTIVE PRODUCTS IS LIMITED TO REPAIR OR REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY. NEITHER ANY PERFORMANCE OR OTHER CONDUCT, NOR ANY ORAL OR WRITTEN INFORMATION, STATEMENT, OR ADVICE PROVIDED BY US OR ANY OF OUR SUPPLIERS, AGENTS, OR EMPLOYEES WILL CREATE A WARRANTY, OR IN ANY WAY INCREASE THE SCOPE OR DURATION OF THIS LIMITED WARRANTY.

Who May Use This Limited Warranty?

This Limited Warranty extends only to the Customer and the original end-user (if such original end-user is someone other than the Customer). As such, this Limited Warranty does not extend to any subsequent or other owner, transferee, or beneficiary of the Products.

What Does This Limited Warranty Cover?

During the Warranty Period, this Limited Warranty covers defects in materials and workmanship in Products purchased from Masport on the Site or otherwise.

What Is The Period Of Coverage Under This Limited Warranty?

This Limited Warranty starts on the date set forth on the Order Confirmation to Customer for the warranted Products and lasts for twelve (12) months thereafter (the “Warranty Period”).

How Do You Obtain Warranty Service?

The Customer or original end-user must provide notice of covered defects in writing to Masport during the Warranty Period and within thirty (30) calendar days following the Customer’s or original end-user’s discovery of such defect (the “Notice Period”).

What Does This Limited Warranty Not Cover?

Notwithstanding anything herein to the contrary, this Limited Warranty does not cover any of the following, each of which are hereby expressly excluded therefrom:

- A. Defects that are not discovered during the Warranty Period;
- B. Defects that are not reported to Masport in writing within the Notice Period;
- C. Usual and customary deterioration or wear resulting from normal use, service, and exposure;

- D. Any Products that are transported outside of the United States;
- E. Any shortages or discrepancies, all of which shall be exclusively governed by the Inspection and Claims section of these Terms set forth above;
- F. Any claims for loss, damage, cost, or expense caused by any delay or damage in shipment or delivery damage, all of which shall be exclusively governed by the terms set forth in the Product Delivery section above;
- G. Shipping or other costs incurred to return the Products to Masport for warranty inspection;
- H. Damage to persons or property other than the Products, or for any incidental, consequential, or special damages.
- I. Any defect and/or any loss, damage, cost, or expense incurred by Customer, original end-user, or any third party to the extent the same arise out of, relate to or result, in whole or in part, from any one or more of the following:
 - 1. Theft, vandalism, accident, war, insurrection, fire or other casualty;
 - 2. Defects or damage caused by the Customer, original end-user, or any third party;
 - 3. Exposure to corrosive, chemical, ash, smoke, fumes, or the like;
 - 4. Any Products that have been altered, modified, or repaired by Customer, original end-user, or any third party without Masport's prior written consent;
 - 5. Failure to perform any preventative maintenance;
 - 6. Storage;
 - 7. Combination or use of the Products with any products, materials, processes, systems, or other matter not provided or authorized in writing by Masport;
 - 8. External causes such as accidents, abuse, or other actions or events beyond our reasonable control; or
 - 9. Any misuse of the products, including any use of the Products not in conformity with product manuals or contrary to product warnings.

Resolution of Warranty Claims:

In the event Masport is notified of a warranty claim in conformity with the notice requirements set forth above, Masport shall, with the full cooperation of Customer and/or original end-user (which shall include, without limitation, return of the Products for warranty inspection if requested by Masport), immediately undertake an investigation of such claim. To the extent Masport determines, in its sole discretion, that the warranty claim is covered by this Limited Warranty, Masport will, as Customer and original end-user's sole and exclusive remedy and at Masport's option, either:

- A. Ship replacement products to Customer or original end-user; or
- B. Ship repaired product(s) to Customer or original end-user.

Masport shall not be responsible to Customer or original end-user for the cost of dismantling any defective Products or installing replacement Products, all of which shall be and for all purposes remain the sole responsibility of Customer and original end-user.

Customer's Responsibility to Masport Concerning Original End-Users:

Customer warrants and represents that if it resells any Products or incorporates any Products into its own merchandise for the purpose of sale, Customer will:

- A. In all instances causes such purchaser to be bound by, and agree to, this Limited Warranty as set forth herein, including all terms and limitations thereof;
- B. Properly affix all warning labels to all Products;
- C. Provide the applicable Masport product manuals to such purchasers.

Disclaimer of Implied Warranties:

CUSTOMER EXPRESSLY ACKNOWLEDGES AND AGREES THAT: (I) THIS LIMITED WARRANTY SET FORTH HEREIN IS AN INTEGRAL PART OF THE AGREEMENT PURSUANT TO WHICH THE PRODUCTS WERE PURCHASED; (II) CUSTOMER (FOR ITSELF AND ON BEHALF OF THE ORIGINAL END-USER, IF APPLICABLE) HAS ACCEPTED THIS LIMITED WARRANTY AS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY MASPORT TO CUSTOMER AND ORIGINAL END-USER WITH RESPECT TO THE PRODUCTS; AND (III) THIS LIMITED WARRANTY IS REFLECTED IN THE PURCHASE PRICE FOR THE PRODUCTS. MASPORT MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, WITH RESPECT TO ANY PRODUCTS, GOODS, OR SERVICES SOLD OR PROVIDED TO THE CUSTOMER PURSUANT TO THE AGREEMENT OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE, ALL OF WHICH ARE EXPRESSLY HEREBY DISCLAIMED.

Limitation on Liabilities and Damages:

THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE OBLIGATION AND LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY OR THE AGREEMENT. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL MASPORT BE LIABLE FOR ANY SPECIAL, INDIRECT, PUNITIVE, COVER, INCIDENTAL OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED, WHETHER IN CONTRACT OR TORT OR UNDER ANY OTHER THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION, LOSS OF REVENUE, ANTICIPATED PROFITS, BUSINESS OR SALES, ANY LOSS OF GOODWILL OR REPUTATION, OR THE COSTS OF SUBSTITUTE GOODS OR PRODUCTS, EVEN IF MASPORT OR AN AUTHORIZED REPRESENTATIVE THEREOF HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ADDITION, TO THE EXTENT PERMITTED BY APPLICABLE LAW, WE (INCLUDING OUR PARENT, SUBSIDIARIES, AND AFFILIATES, AND OUR AND THEIR OFFICERS, DIRECTORS, MANAGERS, AGENTS, AND EMPLOYEES) ARE NOT LIABLE, AND YOU AGREE NOT TO HOLD US RESPONSIBLE, FOR ANY DAMAGES OR LOSSES RESULTING DIRECTLY OR INDIRECTLY FROM:

- A. YOUR USE OF OR YOUR INABILITY TO USE OUR PRODUCTS;
- B. SUSPENSION OR OTHER ACTION TAKEN WITH RESPECT TO THE PRODUCTS OR BREACH OF ANY OF THESE TERMS; OR
- C. YOUR NEED TO MODIFY PRACTICES, CONTENT OR BEHAVIOR OR YOUR LOSS OF OR INABILITY TO DO BUSINESS, AS A RESULT OF CHANGES TO THE AGREEMENT.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN TO THE CONTRARY, IN NO EVENT SHALL THE TOTAL LIABILITY OF MASPORT TO YOU OR ANY THIRD PARTY FOR ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT OR TORT, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, PRODUCT LIABILITY OR OTHERWISE) ARISING FROM THE AGREEMENT OR YOUR PURCHASE OR USE OF THE PRODUCTS EXCEED, IN THE AGGREGATE, THE LISTED PURCHASE PRICE PAID BY YOU FOR THE PRODUCTS YOU PURCHASED PURSUANT TO THE TERMS HEREUNDER.

Some jurisdictions do not allow the exclusion of damages, so such exclusions may not apply to you. The limitation of liability set forth above shall only apply to the extent permitted by applicable law.

Limitation on time to file claims:

TO THE FULLEST EXTENT PERMITTED BY LAW, ANY CAUSE OF ACTION OR CLAIM YOU MAY HAVE ARISING OUT OF OR RELATING TO THE AGREEMENT OR YOUR USE OF OUR PRODUCTS MUST BE COMMENCED WITHIN SIX (6) MONTHS AFTER THE CAUSE OF ACTION ACCRUES, OTHERWISE, SUCH CAUSE OF ACTION OR CLAIM IS PERMANENTLY BARRED.

Indemnification:

You agree to indemnify and hold harmless Masport, its affiliated companies and their respective officers, directors, employees, managers, agents, successors, and assigns ("Indemnified Parties") from and against any claim or demand (including reasonable attorneys' and experts' fees and costs) made by any party due to or arising out of your (a) breach of the Agreement, (b) improper use of the Products, (c) breach of any law or the rights of a third party, or (d) failure to strictly comply with your obligations to Masport concerning original end-users or any representations made by you to such original end-user. Masport shall promptly notify you in writing of any threatened or actual claim or demand and reasonably cooperate with you to facilitate the settlement or defense thereof. You shall have sole control of the defense or settlement of any claim or demand, provided that Masport, at our option and expense, may participate and appear on an equal footing with you. You shall not settle any claim or demand without the written consent of the Indemnified Parties, with such consent not to be unreasonably withheld or delayed.



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Introduction

Congratulations on your purchase of a Masport product. We are delighted you have chosen to join the community of satisfied customers using Masport equipment in daily professional operations.

Our products are backed by over 100 years of engineering excellence and are specifically designed and engineered to meet the needs of hard working pumpers around the world.

Our expert product development, manufacturing and distribution teams work to rigorous quality standards and a strict testing regime. To produce our precision pumps, we only use the finest quality components and materials to ensure the durability of your vacuum pump. Every pump is factory tested before shipping and is backed up with a one-year warranty against all manufacturing defects. This system ensures you receive a quality product.

This manual provides all the information you will need to setup and run your vacuum system correctly to ensure a long and efficient service life. If you have any questions, please contact your local Masport representative or Masport directly.

Our History:

Masport designs, manufactures, and assembles vacuum pumps and associated products. The company was established by Harold Mason and Reuben Porter under the name City Engineering in Auckland, New Zealand, in 1910. Within a couple of years, the Mason and Porter business, or Masport as the company later became known, was manufacturing vacuum pumps and a range of engines to power all types of farm equipment.

Masport first looked to international markets with trial exports of vacuum pumps to the United States in 1956 – and has never looked back since. In 1991 the ownership of Masport's vacuum pump division was transferred to Skellerup Holdings – an iconic New Zealand Company which also celebrated its centenary in 2010.

With Masport on board you have an efficient and reliable pump backed by the best service and support that has made Masport the #1 choice for pumpers worldwide.

Over 100 Years of Engineering Excellence



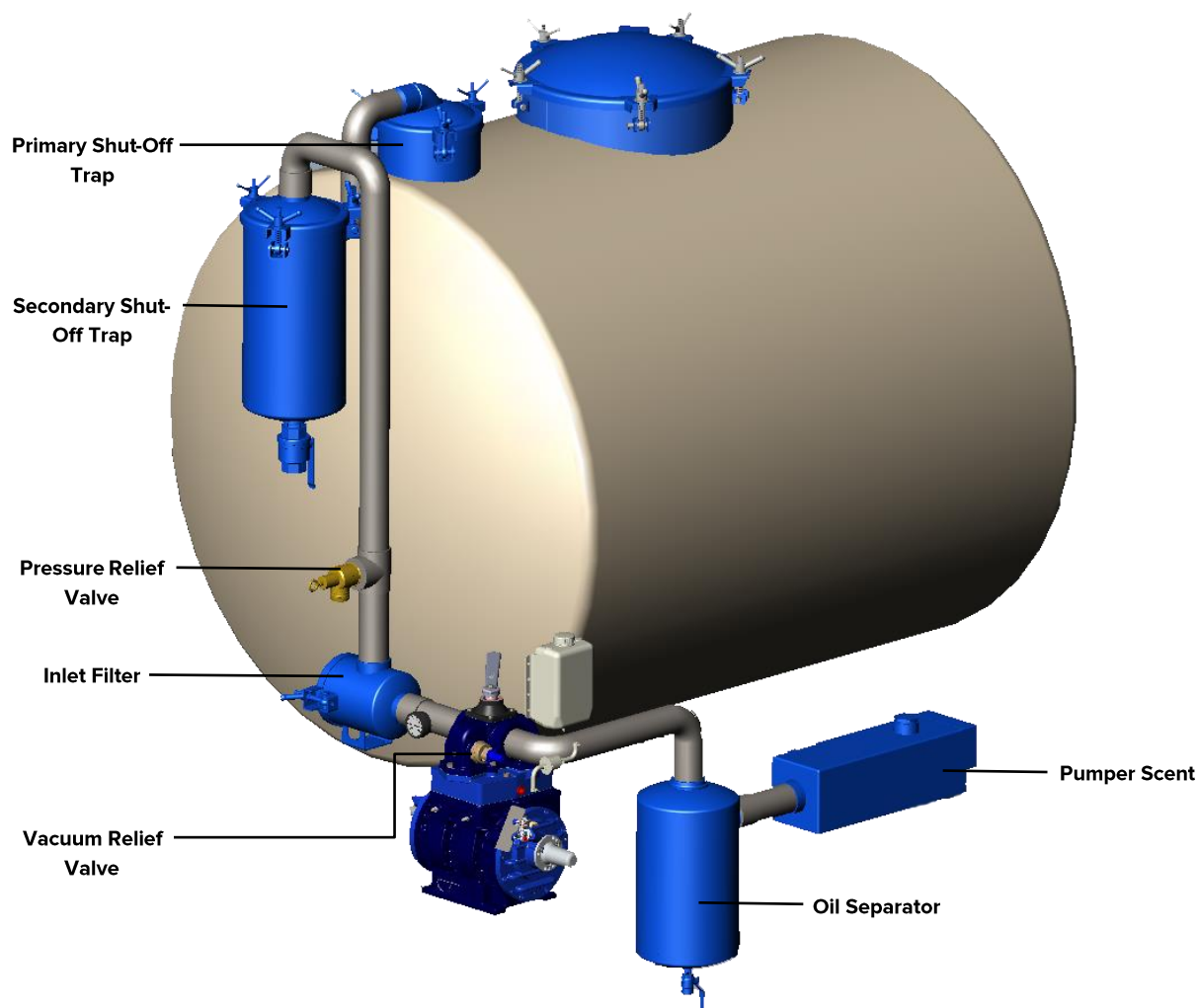
Vacuum Pump Protection

In order for the Vacuum Pump to perform properly and efficiently it is necessary to correctly set-up the vacuum system with the recommended Masport System Components to protect it at all times from liquid and foreign materials from entering it.



Warning! Liquid or foreign material entering the Vacuum Pump will cause damage to the pump which may result in catastrophic failure.

Recommended System Components:



Plumbing:

Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than the porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

The minimum inside diameter of the plumbing to be used on Masport Vacuum Pumps is as follows:

Description	Port Size
HXL2	1 ½"
HXL3	1 ½"
HXL4	1 ½"
HXL75	3"
HXL15	3"
HXL400	3"
VIPER	3"
TITAN	3"
SIDEWINDER	3"
HYDRA	3"

Ensure all pipes, hoses and fittings are thoroughly cleaned before assembly and free of any kind of dirt or debris. Any solid particles ingested by the pump may cause irreparable damage that will result in loss of performance and increased operating noise. Some form of pipe sealant should be used on all thread connections to prevent leaks.

Hoses:

Any hose used in the system is to be rated for at least 28"Hg vacuum and 25 PSI pressure, and withstand air/oil temperatures up to 300 F. Hot-tar and asphalt hose is designed for use in this sort of environment.

Primary Shut-Off Trap

Function and Operation:

The Masport Primary Shut-Off Trap is designed as a float-ball shut-off that prevents liquid in the tank from overflowing into the system and entering the Vacuum Pump. Liquid entering the Vacuum Pump can damage or destroy it.

When the vacuum tank becomes filled, the Primary Shut-Off Trap float ball will rise and seat against the float seat closing off the line between the Primary and Secondary Trap. In the event that the Primary Shut-Off Trap fails or the tank fills so rapidly that there is a lag time between tank filling and primary float ball sealing, the overflow will collect in the Secondary Moisture Trap and shut off its float mechanism before liquid enters the pump.

To ensure effective pump protection from contaminate overflow it is recommended that a Primary Shut-Off Trap is installed with a Secondary Moisture Trap (Scrubber).

Product Range:

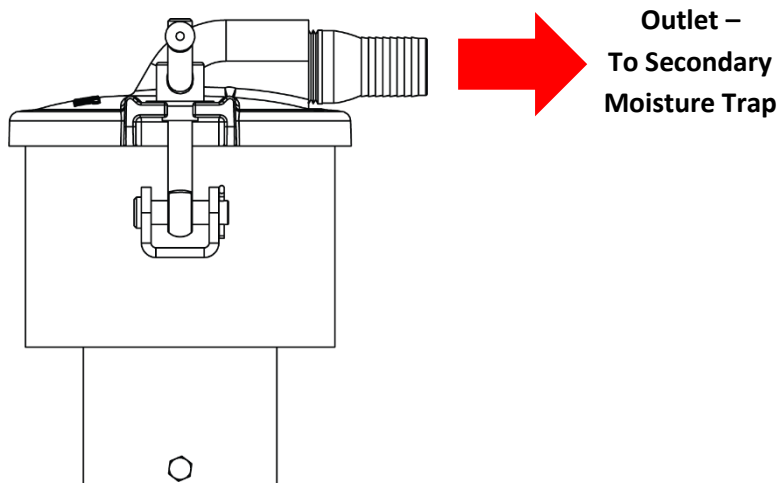
Part Number	Description	Port	Collar Material
16326	Primary Trap – 1 1/2" Hose Barb <i>Steel Collar & Aluminum Lid</i>	1 1/2" Hose Barb	Steel
16336	Primary Trap – 1 1/2" BSP <i>Steel Collar & Aluminum Lid</i>	1 1/2" BSP	Steel
16329	Primary Trap – 2" Hose Barb <i>Steel Collar & Aluminum Lid</i>	2" Hose Barb	Steel
16347	Primary Trap – 3" Hose Barb <i>Steel Collar & Aluminum Lid</i>	3" Hose Barb	Steel
16348	Primary Trap – 3" BSP <i>Steel Collar & Aluminum Lid</i>	3" BSP	Steel
16343	Primary Trap – 1 1/2" Hose Barb <i>Aluminum Collar & Aluminum Lid</i>	1 1/2" Hose Barb	Aluminum
16344	Primary Trap – 2" Hose Barb <i>Aluminum Collar & Aluminum Lid</i>	2" Hose Barb	Aluminum
16349	Primary Trap – 1 1/2" Hose Barb <i>Stainless Collar & Aluminum Lid</i>	1 1/2" Hose Barb	Stainless Steel
16350	Primary Trap – 2" Hose Barb <i>Stainless Collar & Aluminum Lid</i>	2" Hose Barb	Stainless Steel

Positioning:

The Masport Primary Shut-Off should be positioned at the highest point of the vacuum tank. When determining the final location of the Primary Shut-Off, consideration should be given to the location of the Secondary Moisture Trap (Scrubber), and the location of the Secondary Moisture Trap in relation to the Vacuum Pump. By carefully considering the placement of these components before installation, a reduction in plumbing, maintenance and operation costs can be achieved.

Plumbing:

As shown in the Recommend System Component Diagram, the Primary Shut-Off should be plumbed to the inlet of the Secondary Moisture Trap. The inlet of the Secondary Moisture Trap is located on the side of the Secondary Moisture Trap body.



Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than the porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

If not included with the pump, a Vacuum Relief Valve should be installed between the Secondary Moisture Trap and the Vacuum Pump. This valve will serve to protect the pump from damage due to overheating in the event that the float-balls in either the Primary or Secondary Trap are activated by the tank being filled at a time when the operator is not immediately available to stop the system.

Service:

A periodic check on the float seat, float balls and ball cage assembly is recommended. The frequency of inspection is dependent on variables such as type of material moved and the overall duty cycle of the system.

It is recommended to initially check every two to three months in order to establish an inspection program based on wear characteristics specific to your individual application.



Warning! Do not attempt to remove the lid with pressure or vacuum on the system. Failure to do so could lead to equipment damage or catastrophic failure resulting in severe injury.

Lid Installation:

When replacing the lid, follow the below procedure:

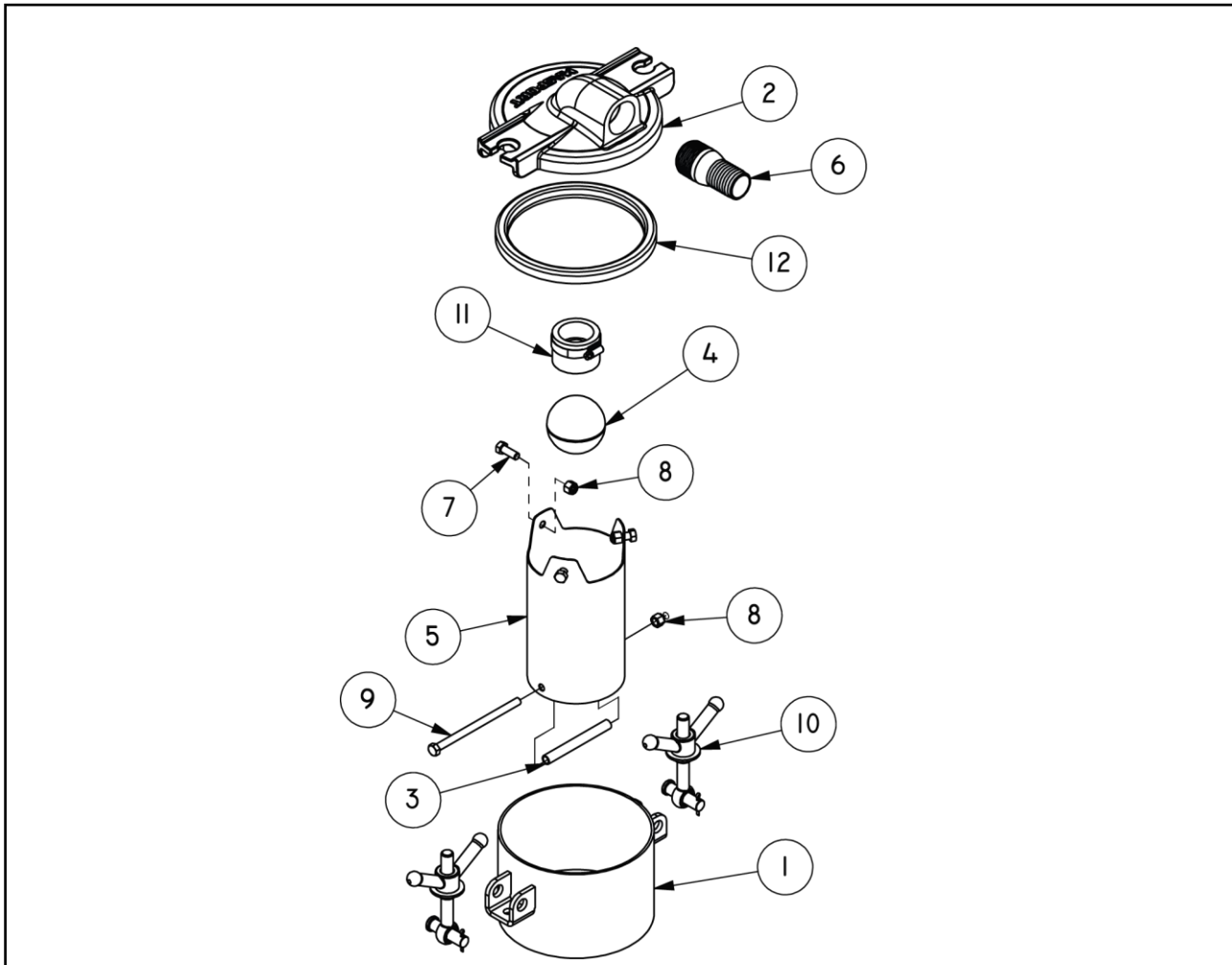
- ▶ Seat the lid onto the gasket and tighten the wingnuts.
- ▶ Start the vacuum pump and draw a vacuum on the tank
- ▶ As the vacuum increases in the tank external pressure will force the lid down. The wingnuts can then be tightened further as the lid has been pulled down into place by the vacuum.

This procedure will ensure a consistent pressure on the gasket.

Replacement Parts:

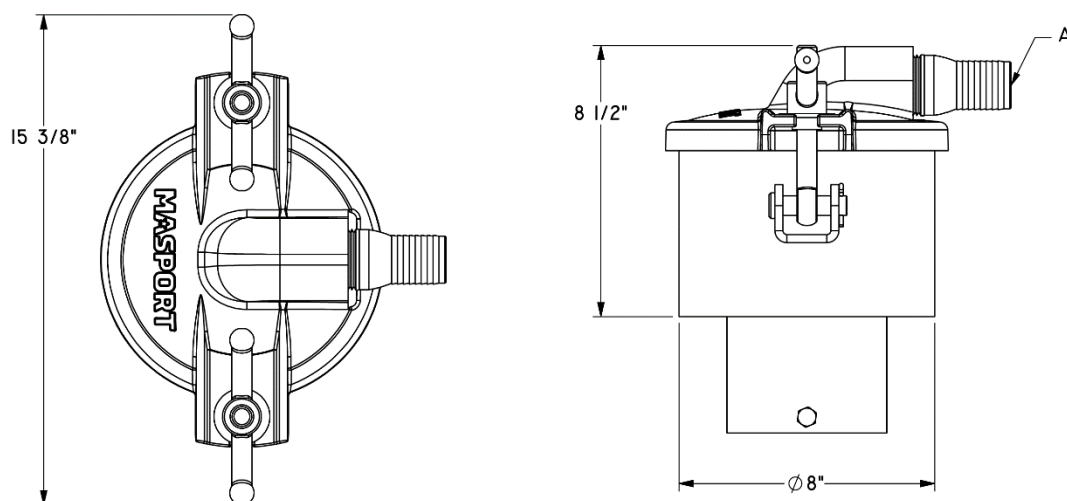
All replacement parts are readily available. Please contact an authorized Masport distributor or Masport directly.

Exploded View



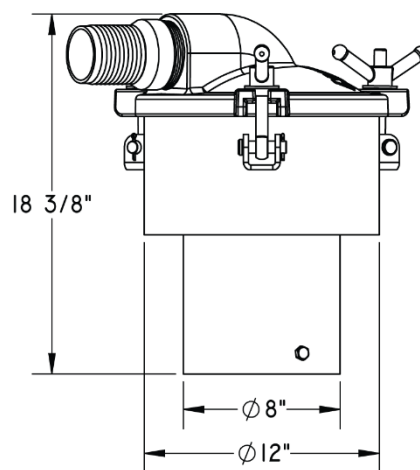
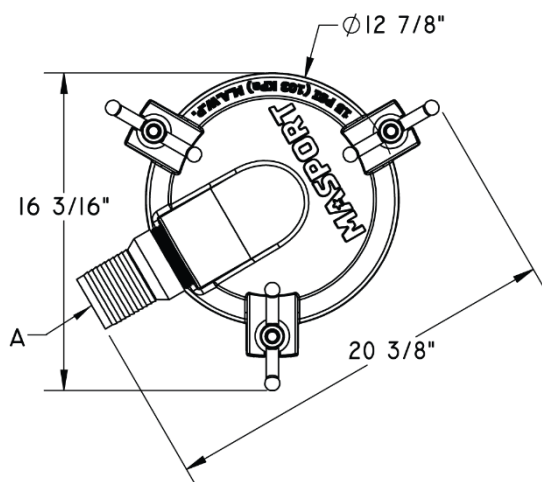
Ref	Description	1 1/2"	2"	3" NPT	3" BSP
1	Primary Collar	N/A	N/A	N/A	N/A
2	Primary Lid	18577	18577	18582	18583
3	Tubing	24291	24291	24291	24291
4	Float Ball	28005	28005	28003	28003
5	Primary Cage	28213	28213	28216	28216
6	Hose Barb	30154	30172	30157	N/A
7	Bolt	503103	503103	11053	11053
8	Nut	503104	503104	503104	503104
9	Bolt	503108	503108	503110	503110
10	Wing Nut Assembly	32608	32608	32608	32608
11	Float Seat	36113	36113	36107	36107
12	Gasket	36516	36516	36518	36518

Dimensional Data – 1 ½" & 2":



Ref	1 ½" Hose Barb	1 ½" NPT/BSP	2" Hose Barb
A	1 1/2" Hose Barb	1 ½" Female NPT/BSP	2" Hose Barb

Dimensional Data – 3”:



Ref	3" Hose Barb	3" BSP
A	3" Hose Barb	3" Female BSP

Secondary Moisture Trap

Function and Operation:

The Masport Secondary Moisture Trap (Scrubber) is designed as a dual-function moisture trap (scrubber) and a secondary shut-off trap that removes liquids still in the air stream after passing through the Primary Shut-Off Trap and prevents it from entering the Vacuum Pump. Liquid entering the Vacuum Pump can damage or destroy it.

When the vacuum tank becomes filled, the primary trap float ball will rise and seat against the float seat closing off the line between the Primary and Secondary Trap. In the event that the Primary Shut-Off Trap fails or the tank fills so rapidly that there is a lag time between tank filling and primary float ball sealing, the overflow will collect in the Secondary Trap and shut off its float mechanism before liquid enters the pump. The Secondary Moisture Trap will also prevent liquid from entering the Vacuum Pump in the event that Primary Shut-Off Trap leaks due to movement of the tank contents during transportation.

After operating the Vacuum Pump, neutralize the pressure on the system and drain the Secondary Moisture Trap by opening the ball valve on the bottom of its body.



Warning! Do not open the ball valve when the tank is under vacuum or pressure. Doing so will allow contaminants into the pumping system that could cause damage to the Vacuum Pump or expel liquid waste onto the ground and operator.

To ensure effective pump protection from contaminate overflow it is recommended that a Primary Shut-Off Trap is installed with a Secondary Moisture Trap (Scrubber).

Product Range:

Part Number	Description	Port	Finish
16422	Secondary Trap – 1 1/2" <i>Painted</i>	1 1/2"	Painted
16423	Secondary Trap – 1 1/2" <i>Unpainted</i>	1 1/2"	Unpainted
16450	Secondary Trap – 3" NPT <i>Painted</i>	3" NPT	Painted
16451	Secondary Trap – 3" NPT <i>Unpainted</i>	3" NPT	Unpainted
16452	Secondary Trap – 3" BSP <i>Painted</i>	3" BSP	Painted

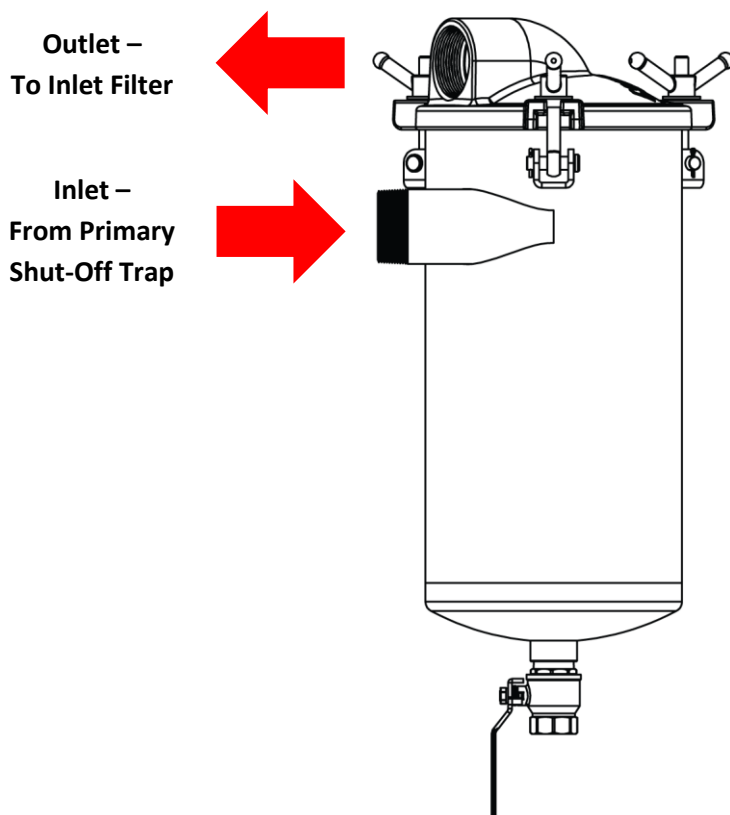
Positioning:

The Masport Secondary Moisture Trap should be positioned on the truck in such a way as to have the outlet port in a vertical position. It should also be mounted near enough to the operator to allow it to be drained at the end of each pumping operation.

When determining the final location of the Secondary Moisture Trap, consideration should be given to the location of the Primary Shut-Off Trap, and the location of the Vacuum Pump. By carefully considering the placement of these components before installation, a reduction in plumbing, maintenance and operation costs can be achieved.

Plumbing:

As shown in the Recommend System Component Diagram, the Secondary Moisture Trap has an inlet and an outlet. The inlet is on the side of the Secondary Moisture Trap body and is to be plumbed to the Primary Shut-Off Trap. The outlet is on the lid of the Secondary Moisture Trap and is to be connected to the line going to the Vacuum Pump.



Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than the porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

If not included with the pump, a Vacuum Relief Valve should be installed between the Secondary Moisture Trap and the Vacuum Pump. This valve will serve to protect the pump from damage due to overheating in the event that the float-balls in either the Primary or Secondary Trap are activated by the tank being filled at a time when the operator is not immediately available to stop the system.

Service:

A periodic check on the float seat, float balls and ball cage assembly is recommended. The frequency of inspection is dependent on variables such as type of material moved and the overall duty cycle of the system.

It is recommended to initially check every two to three months in order to establish an inspection program based on wear characteristics specific to your individual application.



Warning! Do not attempt to remove the lid with pressure or vacuum on the system. Failure to do so could lead to equipment damage or catastrophic failure resulting in severe injury.

Lid Installation:

When replacing the lid, follow the below procedure:

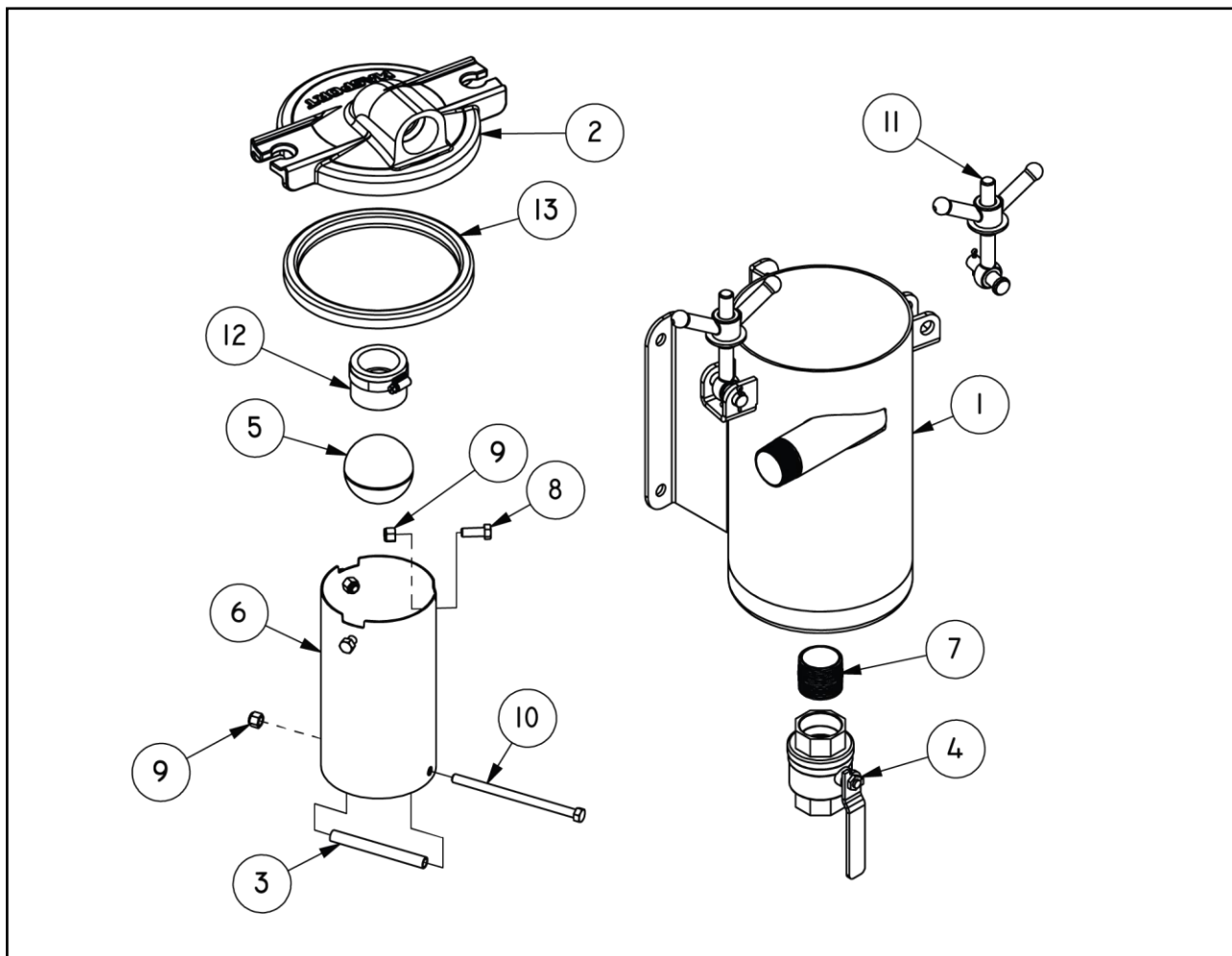
- ▶ Seat the lid onto the gasket and tighten the wingnuts.
- ▶ Start the vacuum pump and draw a vacuum on the tank
- ▶ As the vacuum increases in the tank external pressure will force the lid down. The wingnuts can then be tightened further as the lid has been pulled down into place by the vacuum.

This procedure will ensure a consistent pressure on the gasket.

Replacement Parts:

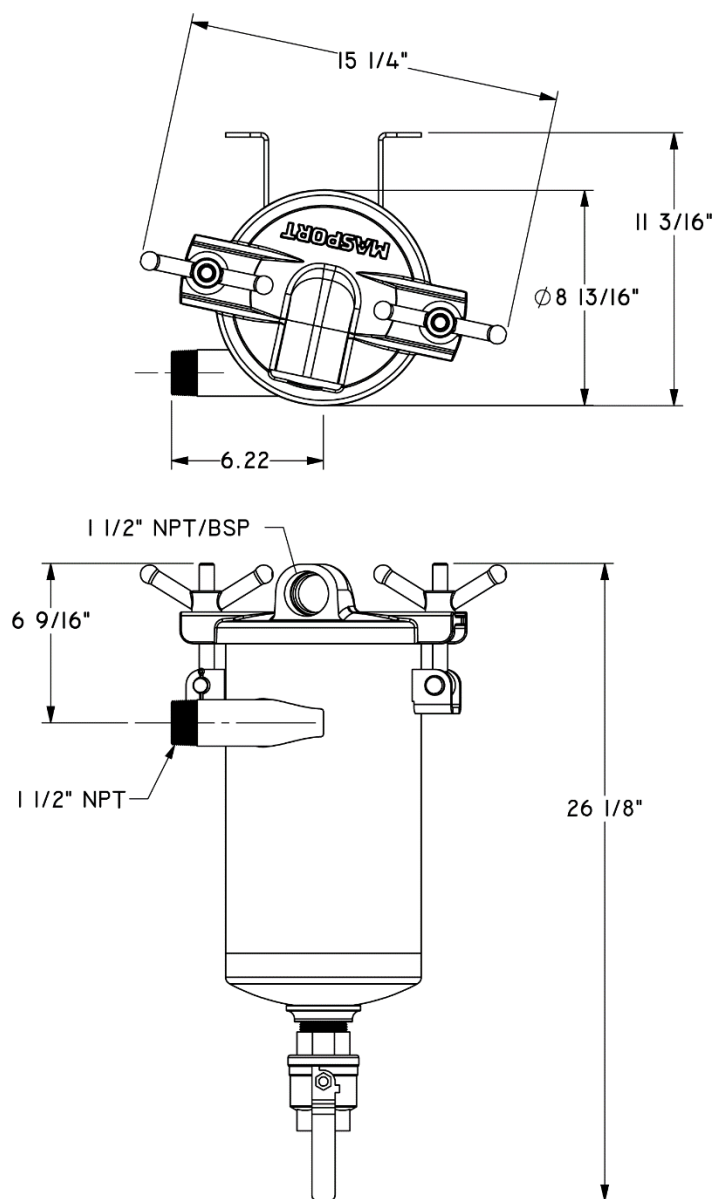
All replacement parts are readily available. Please contact an authorized Masport distributor or Masport directly.

Exploded View – 1 1/2" & 3":



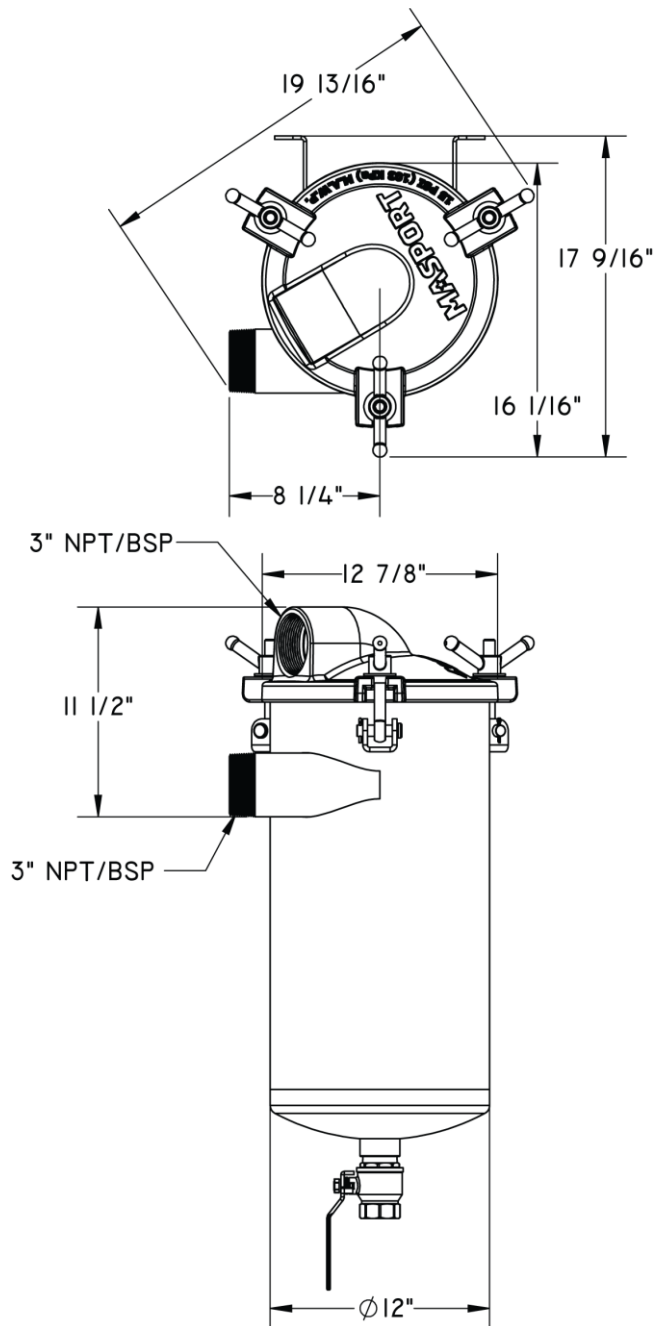
Ref	Description	1 1/2" NPT	3" NPT	3" BSP
1	Secondary Body	N/A	N/A	N/A
2	Secondary Lid	18577	18582	18583
3	Tubing	24291	24291	24291
4	Ball Valve	25155	25155	25155
5	Float Ball	28005	28003	28003
6	Secondary Cage	28213	28216	28216
7	Close Nipple	30033	30033	30033
8	Bolt	32265	11053	11053
9	Nut	32287	503104	503104
10	Bolt	32328	503110	503110
11	Wingnut Assembly	32608	32608	32608
12	Float Seat	36113	36107	36107
13	Gasket	36516	36518	36518

Dimensional Data – 1 1/2":



* OEM Versions Supplied Less Mounting Brackets

Dimensional Data – 3”:



* OEM Versions Supplied Less Mounting Brackets

Inlet Filter

Function and Operation:

The Masport Inlet Filter is designed as the last line of defense for the Vacuum Pump. The filter element of the Inlet Filter prevents small particulate matter and items that float and may have bypassed the Primary and Secondary Trap from entering the Vacuum Pump

Due to the high air flow rates and rapid loading capabilities of the system, an Inlet Filter, in addition to both the Primary and Secondary Trap, is recommended.

To ensure effective pump protection from contaminate overflow it is recommended that filter element should be checked and cleaned, or replaced regularly.

Product Range:

Part Number	Description	Port	Finish
15134	Prefilter – 1 1/2" <i>Painted</i>	1 1/2"	Painted
15134-1	Prefilter – 1 1/2" <i>Unpainted</i>	1 1/2"	Unpainted
15133	Prefilter – 3" NPT <i>Painted</i>	3" NPT	Painted
15133-1	Prefilter – 3" NPT <i>Unpainted</i>	3" NPT	Unpainted
15135	Prefilter – 3" BSP <i>Painted</i>	3" BSP	Painted

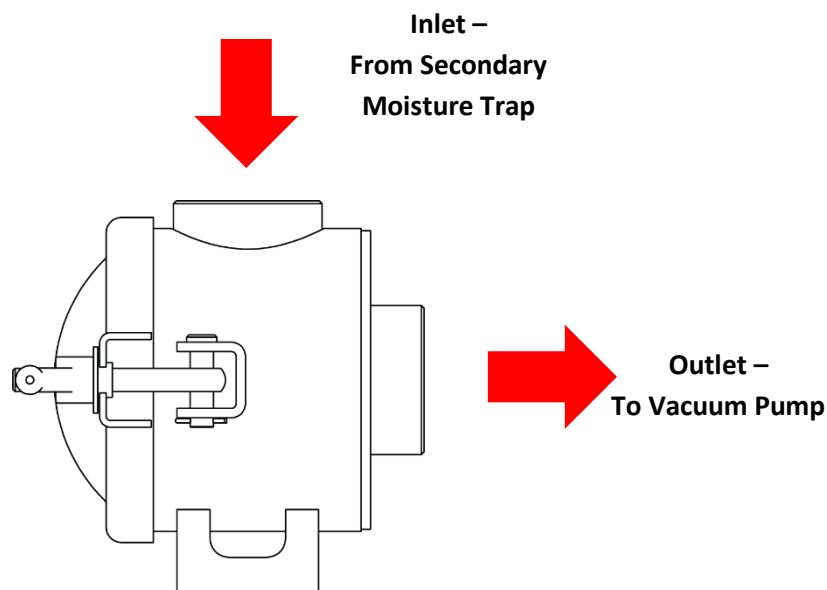
Positioning:

The Masport Inlet Filter can be mounted vertically or horizontally without losing its effectiveness. Although horizontal mounting is recommended to prevent debris potentially falling into the pump during filter element cleaning. It should also be mounted near enough to the operator to allow easy access for cleaning the filter element.

When determining the final location of the Inlet Filter, consideration should be given to the location of the Secondary Moisture Trap, and the location of the Vacuum Pump. By carefully considering the placement of these components before installation, a reduction in plumbing, maintenance and operation costs can be achieved.

Plumbing:

As shown in the Recommend System Component Diagram, the Inlet Filter has an inlet and an outlet. The inlet is on the side of the Secondary Moisture Trap and is to be plumbed to the Secondary Moisture Trap. The outlet is on the base of the Inlet Filter and is to be connected to the Vacuum Pump.



Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

Service:

A periodic check on the filter element is recommended. The frequency of inspection is dependent on variables such as type of material moved and the overall duty cycle of the system. As the filter element is a custom-made, pleated, stainless steel filter element with heat and oil resistant silicone seals it can be used repeatedly and does not need replacement until damaged. To clean wash with warm water and soap (do not use high pressure washers), from the inside of the filter element to the outside.

It is recommended to initially check every two to three months in order to establish an inspection program based on the characteristics specific to your individual application.



Warning! Do not attempt to remove the lid with pressure or vacuum on the system. Failure to do so could lead to equipment damage or catastrophic failure resulting in severe injury.

Lid Installation:

When replacing the lid, follow the below procedure:

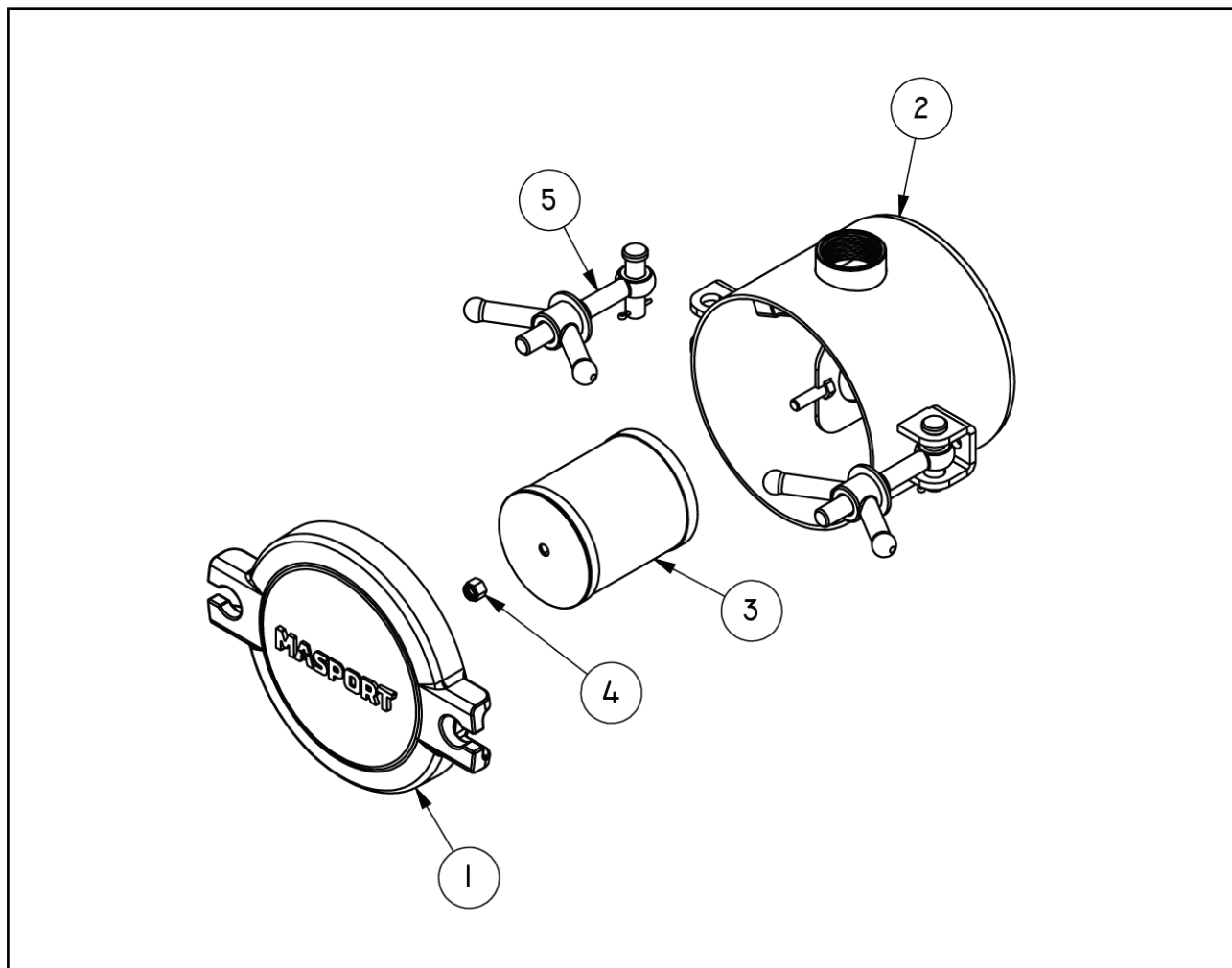
- ▶ Seat the lid onto the gasket and tighten the wingnuts.
- ▶ Start the vacuum pump and draw a vacuum on the tank
- ▶ As the vacuum increases in the tank external pressure will force the lid down. The wingnuts can then be tightened further as the lid has been pulled down into place by the vacuum.

This procedure will ensure a consistent pressure on the gasket.

Replacement Parts:

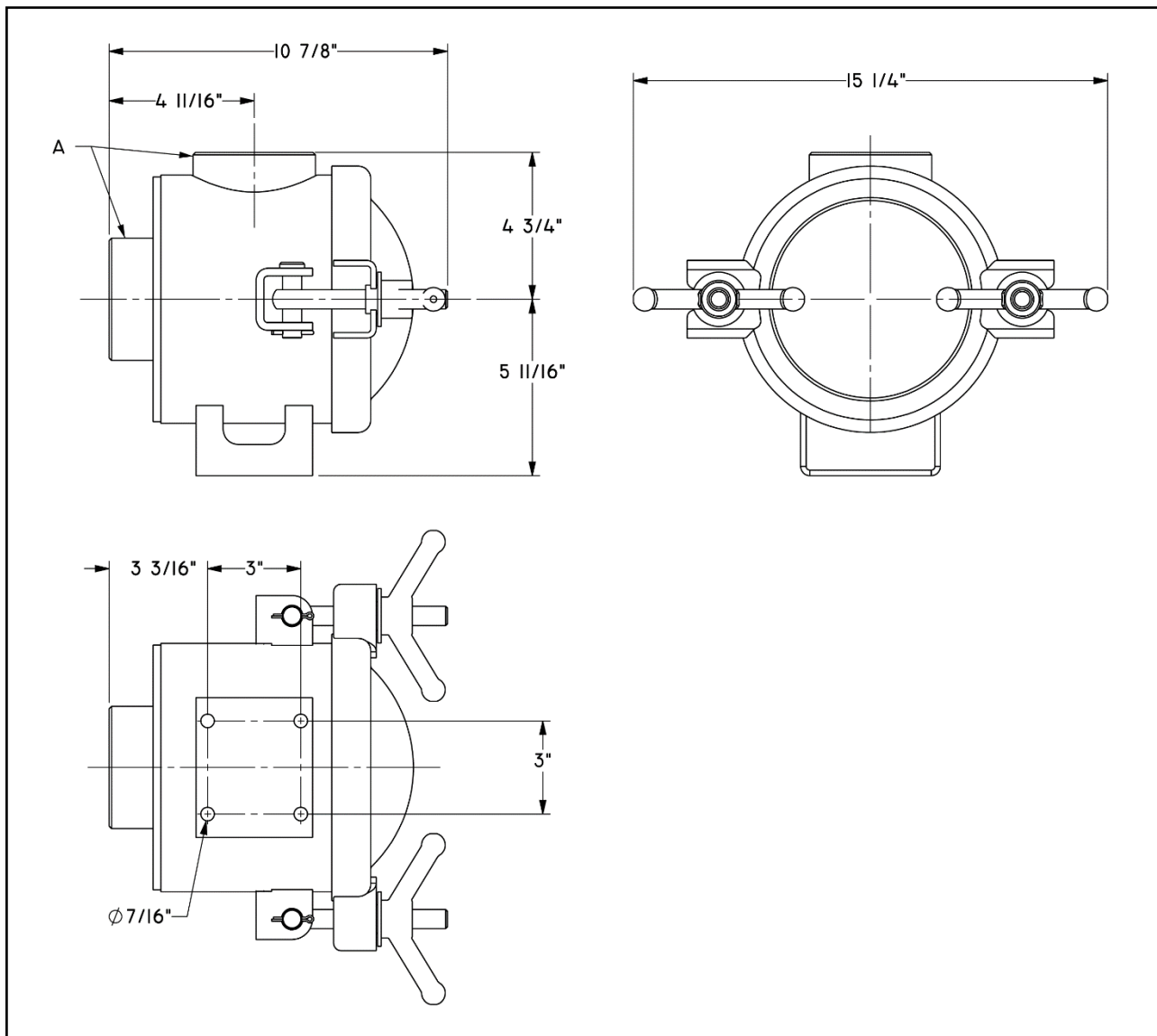
All replacement parts are readily available. Please contact an authorized Masport distributor or Masport directly.

Exploded View:



Ref	Description	1 ½"	3" NPT	3" BSP
1	Filter Lid	18183	18183	18183
2	Filter Body	N/A	N/A	N/A
3	Filter Element	26130	26130	26130
4	Nut ½"	32005	32005	32005
5	Wingnut Assy	32608	32608	32608

Dimensional Data:



Ref	1 1/2"	3" NPT	3" BSP
A	1 1/2"	3" NPT	3" BSP

* OEM Versions Supplied Less Mounting Brackets

Oil Separator (Muffler)

Function and Operation:

The Masport Oil Separator is designed as a dual-function separator to remove the oil from the Vacuum Pumps exhaust and as a muffler to reduce the operating sound level of the vacuum system.

To ensure effective operation oil should be drained from the Oil Separator through the ball valve at least twice daily, or every time switching the Vacuum Pump from vacuum to pressure mode.



Warning! Do not open the ball valve when the tank is under vacuum or pressure. Doing so will allow contaminants into the pumping system that could cause damage to the Vacuum Pump or expel liquid waste onto the ground and operator.

Oil removed from the Oil Separator should be disposed of at an appropriate recycling site.



Warning! Do not reuse the oil drained from the Oil Separator in the pump.

Product Range:

Part Number	Description	Port	Finish
15472	Oil Separator/Muffler – 1 1/2" <i>Painted</i>	1 1/2"	Painted
15469	Oil Separator/Muffler – 1 1/2" <i>Unpainted</i>	1 1/2"	Unpainted
15477	Oil Separator/Muffler – 1 1/2" <i>Aluminum</i>	1 1/2"	Aluminum
15479	Oil Separator/Muffler – 2" <i>Aluminum</i>	2"	Aluminum
15466	Oil Separator/Muffler – 3" NPT <i>Painted</i>	3" NPT	Painted
15466-1	Oil Separator/Muffler – 3" NPT <i>Unpainted</i>	3" NPT	Unpainted
15466-5	Oil Separator/Muffler – 3" BSP <i>Painted</i>	3" BSP	Painted
15467	Oil Separator/Muffler – 4" NPT <i>Unpainted</i>	4" NPT	Unpainted

Positioning:

The Masport Oil Separator should be positioned on the truck in such a way as to be in a vertical position. It should also be mounted high enough to allow the operator to drain it at the end of each pumping operation and between switching the Vacuum Pump from vacuum to pressure mode.

It is recommended that it should also be mounted on the opposite side of the truck from the Vacuum Pump. This is because the Oil Separator is connected to the exhaust of the Vacuum Pump

and it is therefore desirable to have in this location to improve the working conditions for the operator away from potentially foul odors and exhaust fumes.

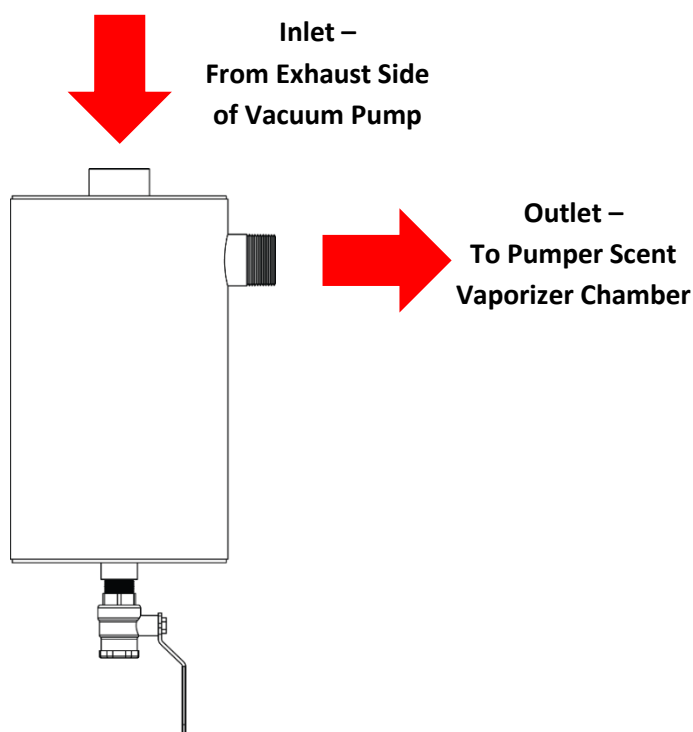
When determining the final location of the Oil Separator, consideration should be given to the location of the Vacuum Pump. By carefully considering the placement of these components before installation, a reduction in plumbing, maintenance and operation costs can be achieved.

Plumbing:

As shown in the Recommend System Component Diagram, the Oil Separator has an inlet and an outlet. The inlet is on top of the Oil Separator and is to be plumbed to the exhaust side of the pump. The outlet is on the side of the body of the Oil Separator and is to be plumbed either to a Pumper Scent Vaporizer Chamber or to a plumbing configuration to direct the exhaust as desired.



Warning! When using plumbing off the outlet of the Oil Separator, ensure that a minimum distance of 12" is left between the outlet of the plumbing and the ground. If closer particulate matter can be drawn back into the pump when operating under pressure, and potentially damage the pump.

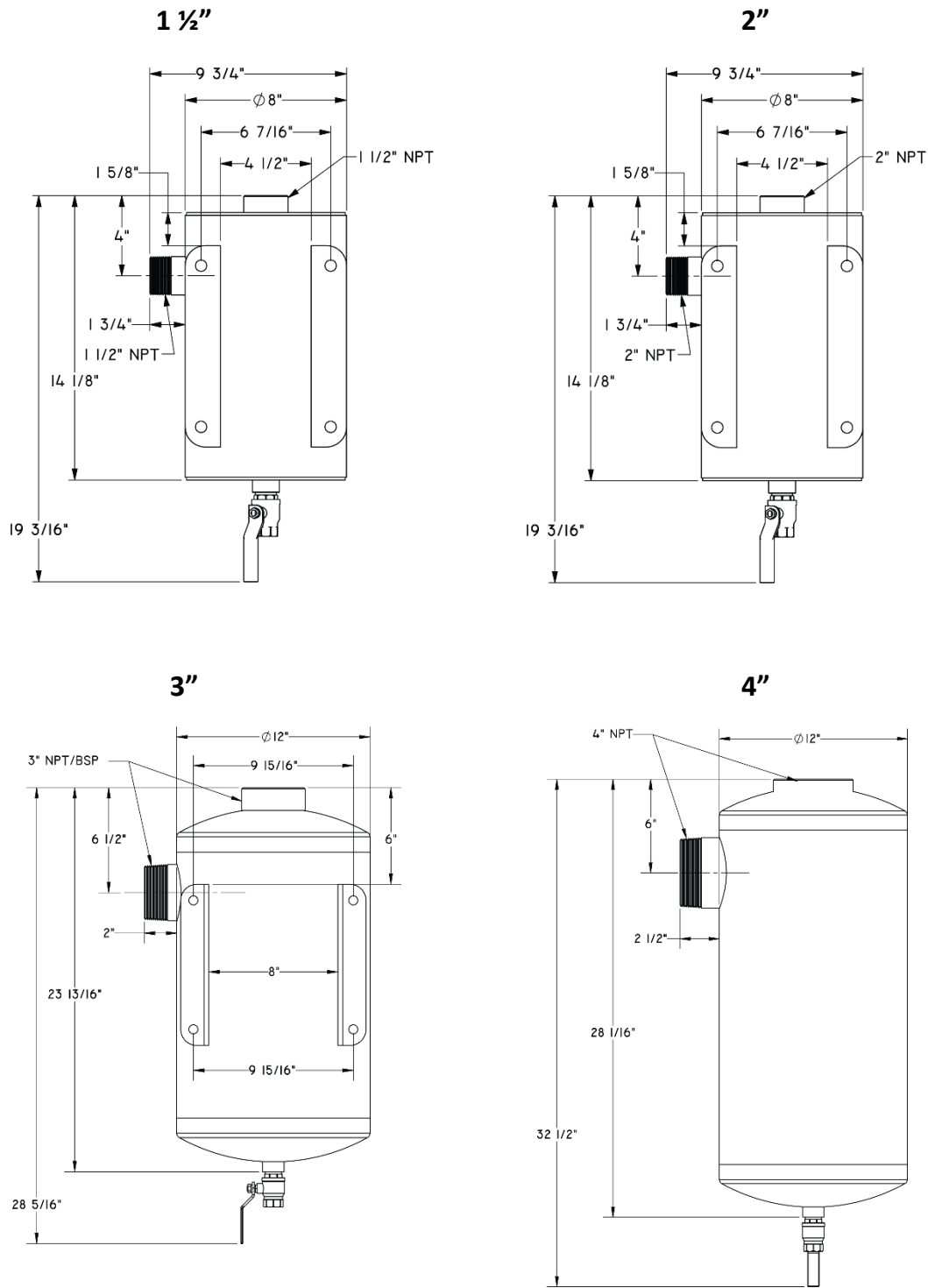


Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than the porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

Dimensional Data



* OEM and Aluminum Versions Supplied Less Mounting Brackets

Pumper Scent

Function:

Pumper Scent uses vaporized odor control to deodorize the air exhausted from the Vacuum Pump. When the exhaust air travels through the Vaporizer Chamber, it causes the Pumper Scent Fluid to evaporate. After evaporating, the Pumper Scent molecules attach to the molecules in the air and neutralize the odor.

An Oil Separation device is necessary for any system with a Pumper Scent Chamber because if oil contaminates the Vaporization Chamber the efficiency of the device decreases.

Its use is recommended in environmentally sensitive areas.

Positioning:

The Pumper Scent Vaporizer Chamber is to be mounted as the last item on the exhaust of your vacuum system.

Whilst versatile as to where it can be positioned, the Vaporizer Chamber needs to be mounted with the fill spout vertical.

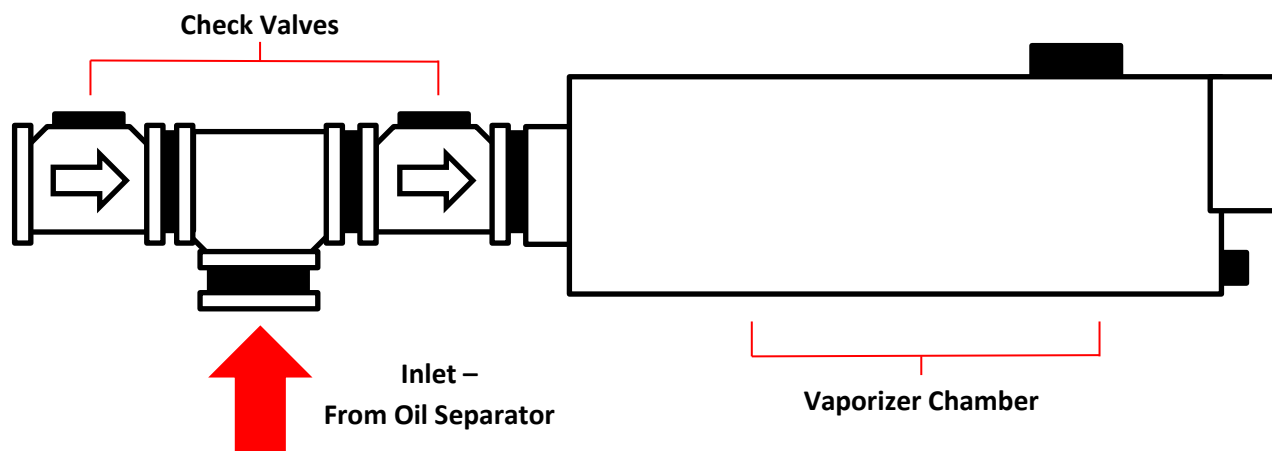
Plumbing:

As shown in the Recommend System Component Diagram, the Vaporizer Chamber only has an inlet. The inlet is to be plumbed to the Oil Separator.

It is important that two swing check valves are installed in line with the Vaporizer Chamber so that no Pumper Scent Oil is sucked into the pump when in pressure mode.



Warning! If Pumper Scent Fluid get into the pump it can cause the vanes to stick in the rotor and the pump may overheat and be damaged.



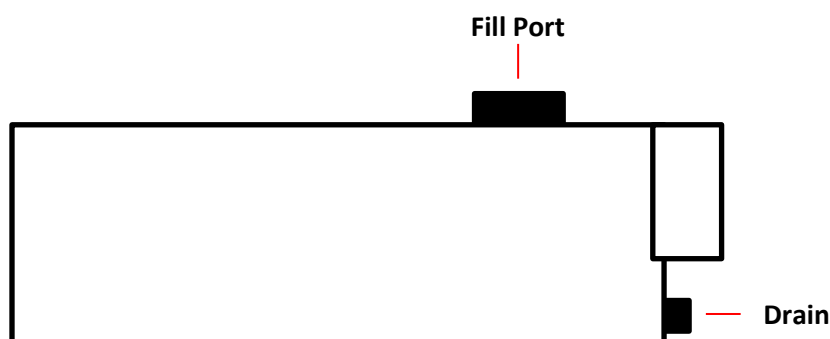
Whatever the configuration of the vacuum system on your truck or trailer, all components and plumbing must be of adequate size or the system will not operate correctly.



Warning! Do not use a hose smaller than the porting size of the vacuum pump or the airflow will be restricted and the pump may overheat and be damaged.

Operation:

Before the first use of any Pumper Scent a specified amount of Pumper Scent Fluid needs to be put into the Vaporizer Chamber. This is referred to as the Initial Charge. Every size chamber has a specific amount necessary. Pour the Pumper Scent Fluid through the 2" fill port located on top of the Vaporizer Chamber.



The below table details the Initial Charge for each size chamber:

Product Number	Plumbing Size	Dimensions	Initial Charge
15613	1 ½"	6" x 6" x 16"	½ Quart
15625	2"	6" x 6" x 16"	½ Quart
15611	3"	8" x 8" x 24"	1 Quart

Refilling or Recharging the Vaporizer chamber with Pumper Scent Fluid is only necessary when the Odor Reappears. The below table details the Recharge for each size chamber:

Product Number	Plumbing Size	Dimensions	Recharge
15613	1 ½"	6" x 6" x 16"	¼ Quart
15625	2"	6" x 6" x 16"	¼ Quart
15611	3"	8" x 8" x 24"	½ Quart

Service:

The Vaporizer Chamber requires limited servicing and maintenance. For best performance it is recommended to annually drain and clean the Vaporizer Chamber.

Relief Valves



Warning! Operating your system without properly installed Vacuum and Pressure Relief Valves in good working order could lead to equipment damage or catastrophic failure resulting in severe injury.

Vacuum Relief Valve:

The Vacuum Relief Valve governs the operating vacuum level. If not included with the pump, a Vacuum Relief Valve should be installed between the Secondary Moisture Trap and the Vacuum Pump. This valve will serve to protect the pump from damage due to overheating in the event that the float-balls in either the Primary or Secondary Trap are activated by the tank being filled at a time when the operator is not immediately available to stop the system.

For optimum pump life and performance the Vacuum Relief Valve should be set at a maximum continuous working vacuum level for each Masport Vacuum Pump as detailed in the table below:

Pump	Vacuum Relief Valve Setting (at Sea Level)
HXL2	20 "Hg
HXL3	20 "Hg
HXL4	20 "Hg
HXL5	20 "Hg
HXL75	20 "Hg
HXL75W	25 "Hg

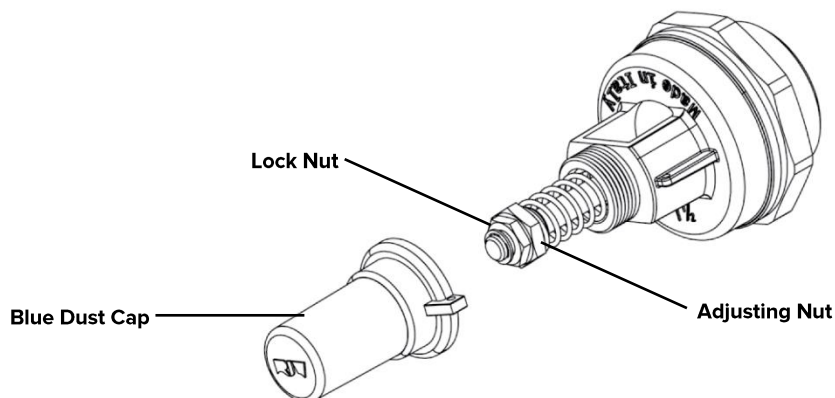
Pump	Vacuum Relief Valve Setting (at Sea Level)
VIPER	22 "Hg
TITAN	22 "Hg
SIDEWINDER	22 "Hg
HYDRA	25 "Hg
HXL400W	25 "Hg

The working vacuum level should be decreased by 1" Hg for every 1,000ft of elevation.

To set the Vacuum Relief Valve:

- ▶ Unscrew and remove the Blue Dust Cap;
- ▶ Loosen the Lock Nut and adjust the vacuum level by increasing or decreasing spring tension with the Adjusting Nut; and
- ▶ When the vacuum level is set retighten the Lock Nut and screw the Blue Dust Cap back on.

The Vacuum Relief Valve setting should be verified by using a quality liquid filled vacuum gauge.



Pressure Relief Valve:

The Pressure Relief Valve regulates the amount of pressure the system is exposed to. It should be located between the Secondary Moisture Trap and the Vacuum Pump on the clean side of the system.

It is recommended to set the Pressure Relief valve below 15 PSI. This level is adequate in majority of applications.

For pressure settings above 15 PSI the tank manufacturer should be consulted for recommended operating pressures.

To set the Pressure Relief Valve consult the manufacturers setup guide.

Maintenance and Important Operating Tips

To keep the pump in a workable condition, operators should undertake regular maintenance and keep a written log of those checks.

Before Starting:

- ▶ Ensure a vacuum relief valve and a pressure relief valve are installed in the system and adjusted to recommended settings, taking into account the altitude of the job location.
- ▶ Always bleed the tank to atmospheric pressure before switching the valve from vacuum to pressure or from pressure to vacuum.

Every Load:

- ▶ Drain the scrubber after each tank load. If nothing drains when the ball valve is opened never assume it is empty, check for a blockage in the valve.
- ▶ Check the oil level in the oil reservoir, and fill as required.
- ▶ Monitor vacuum/pressure and temperature gauges to detect any irregularities or problems.

Daily:

- ▶ Add oil approximately every 10 hours of operation or when the oil reservoir shows the level is low. Only use approved lubricants.
- ▶ Drain the oil separator twice daily or every time switching the Vacuum Pump from vacuum to pressure mode. A brass ball valve is mounted at the bottom for easy draining.

Weekly:

- ▶ Flush the pump weekly with Masport Flushing Fluid, or anytime liquids or solids have been allowed to enter the pump.
- ▶ Check and clean the Inlet Filter. Ensure the filter is completely dry before refitting. This checking process must be done anytime contamination may have entered the system.
- ▶ Check to ensure the pump RPM is within the recommended range. Running the pump too fast or too slow may cause damage.
- ▶ Wash any dirt off the pump as it needs to be clean to allow heat to radiate and prevent it from overheating.

Annually:

- ▶ Check bolt mountings, drive coupling alignment and condition, and vane wear.

Storage:

- ▶ If the pump is to be sitting for an extended period of time it needs to be flushed prior to storage. After flushing, pour oil into all bearing lubrication ports to protect the bearing surfaces and oil injection points on the pump to eliminate rust formation on the rotor and cylinder.
- ▶ Rotate by hand monthly to distribute oil.

For Safe Operation:

- ▶ Never use the pump to move flammable or highly caustic material.
- ▶ Do not open any ball valve on any components when the tank is under vacuum, as this will cause foreign material to enter the pump.
- ▶ Do not over speed or under speed the pump as either will cause overheating.
- ▶ Do not engage power take off at high RPM. Only engage at idle.
- ▶ Always disengage the pump when driving to or between job sites.
- ▶ Do not reuse the oil drained from the oil separator. Take it to an appropriate recycling site.
- ▶ Never run the pump without oil.
- ▶ Never spin the pump backwards.
- ▶ Never remove the stub shafts from the rotor. The rotor has been machined as a complete unit for exact balance. Removing the stub shafts will destroy the factory-set clearances and balance.
- ▶ No maintenance should be undertaken, or parts be removed if there is either pressure or vacuum in the tank.





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